

CLAIMS

The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention

5 what is claimed is:

1. A weld fixture apparatus, comprising:

a fixture base upon which a sensor package having a sensor base
10 and a sensor cover is located

a load bar associated with a spring, wherein said load bar provides a specific weight to said fixture base in order to assist in maintaining said sensor cover and said sensor base parallel to one another upon said fixture
15 base; and

an adjustable load foot located above said fixture base, wherein said adjustable load foot applies a pre-determined load with a specific weight to said sensor base in order to maintain said sensor cover and said sensor
20 base securely in place as said sensor base and said sensor cover are welded to one another in order to configure said sensor package.

2. The apparatus of claim 1 further comprising a plurality of guideposts integrated with said load bar in order to assist in maintaining said sensor
25 cover and said sensor base parallel to one another upon fixture base.

3. The apparatus of claim 1 wherein said sensor package comprises a SAW sensor.

30 4. The apparatus of claim 3 wherein said SAW sensor comprises at least one quartz component.

5. The apparatus of claim 1 further comprising a welding mechanism for tack welding said sensor cover to said sensor base in order to seal said sensor package.

5 6. The apparatus of claim 5 wherein said tack welding is provided by said welding mechanism at a low laser power for sealing said sensor package.

7. The apparatus of claim 6 wherein said sensor cover and said sensor
10 base are located perpendicular to a laser beam generated by said welding mechanism for sealing said sensor package.

9. The apparatus of claim 1 further comprising a welding mechanism for stitch welding said sensor cover to said sensor base via a plurality of stitch
15 welds for sealing said sensor package.

10. The apparatus of claim 1 further comprising a welding mechanism for welding said sensor cover to said sensor base, wherein said welding mechanism comprises a high power laser.

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11. A weld fixture apparatus, comprising:

a fixture base upon which a SAW sensor package having a sensor base and a sensor cover is located

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a load bar associated with a spring, wherein said load bar provides a specific weight to said fixture base in order to assist in maintaining said sensor cover and said sensor base parallel to one another upon said fixture base; and

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a plurality of guideposts integrated with said load bar in order to assist in maintaining said sensor cover and said sensor base parallel to one

another upon fixture base;

an adjustable load foot located above said fixture base, wherein said adjustable load foot applies a pre-determined load with a specific weight to
5 said sensor base in order to maintain said sensor cover and said sensor base securely in place as said sensor base and said sensor cover are welded to one another in order to configure said SAW sensor package.

12. A weld fixture method, comprising the steps of:
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providing a fixture base upon which a sensor package having a sensor base and a sensor cover is located

associating a load bar with a spring, wherein said load bar provides a
15 specific weight to said fixture base in order to assist in maintaining said sensor cover and said sensor base parallel to one another upon said fixture base; and

locating an adjustable load foot above said fixture base, wherein said
20 adjustable load foot applies a pre-determined load with a specific weight to said sensor base in order to maintain said sensor cover and said sensor base securely in place as said sensor base and said sensor cover are welded to one another in order to configure said sensor package.

25 13. The method of claim 12 further comprising the step of integrating a plurality of guideposts with said load bar in order to assist in maintaining said sensor cover and said sensor base parallel to one another upon fixture base.

14. The method of claim 12 wherein said sensor package comprises a
30 SAW sensor.

16. The method of claim 12 further comprising the step of initially tack

welding said sensor cover to said sensor base in order to seal said sensor package.

17. The method of claim 16 wherein said tack welding is provided by
5 utilizing low laser power.

18. The method of claim 17 wherein said sensor cover and said sensor
base are located perpendicular to a laser beam generated by said low power
laser.
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19. The method of claim 16 further comprising the step of:

thereafter stitch welding said sensor cover to said sensor base.

15 20. The method of claim 19 further comprising the step of

thereafter welding said sensor cover to said sensor base utilizing a
high power laser.